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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/739,455	12/17/2003	Adiel Abileah	0594.0279	9319
7590	06/22/2005		EXAMINER	
Kevin L. Russell Suite 1600 601 SW Second Ave. Portland, OR 97204-3157			CHOWDHURY, TARIFUR RASHID	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/739,455

Applicant(s)

ABILEAH ET AL.

**Examiner**

Tarifur R. Chowdhury

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s), ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-28 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/17/05;08/09/04 & 05/04/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1 and 3-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Knapp et al., (Knapp), USPAT 5,838,308.**

3. Knapp discloses and shows in Figs. 1 and 2, an active matrix liquid crystal device comprising:

(a) a front electrode layer (23);

(b) a rear electrode layer (22);

(c) a liquid crystal material located between the front electrode layer and the rear electrode layer (col. 4, lines 63-64);

(d) changing an electrical potential between the rear electrode layer and the front electrode layer to selectively modify portions of the liquid crystal material to change the polarization of the incident light (inherent);

(e) a plurality of light sensitive elements (18) located together with the rear electrode layer; and

(f) a processor that determines the position of at least one of the plurality of light sensitive elements that has been inhibited from sensing ambient light (see paragraph bridging columns 7-8).

Knapp teaches the device of claim 1 wherein each of the light sensitive elements

include a transistor (see TFT 24).

Knapp also teaches wherein each of the light sensitive elements includes a first transistor that senses ambient light, and a second transistor that is inhibited from sensing ambient light with respect to the first transistor (see TFT 20).

Knapp further teaches that wherein at least one of the first transistor and the second transistor is a thin-film transistor (see col. 5, lines 1-2) and that the thin-film transistor is amorphous silicon (see col. 5, lines 52-53).

Knapp also teaches the device of claim 3, wherein a terminal of the first transistor is connected to a terminal of the second transistor with a first conductor (see terminal 16) and the first conductor is capacitively coupled to a common line (see common electrode 23). Knapp further teaches that the common line has a voltage potential less than the first conductor (this is an intended use limitation and the display is capable of being used in this manner, also see col. 7, lines 25+).

Knapp also discloses that the light sensitive display comprising a light valve including a front polarizing element, a rear polarizing element (see the last paragraph column 5), and light rotating material located between the first polarizing element and the rear polarizing element (twisted nematic LC);

Knapp further teaches that the device further comprising a processor that receives information from the light sensitive elements and determines at least one of regions of the display where ambient light is inhibited from reaching the light sensitive elements and regions of the display wherein light in excess of the ambient light reaches the light sensitive elements (see paragraph bridging columns 7-8).

Knapp also shows in Figs. 1 and 2 that the transistors are arranged in a row or in a column.

Accordingly, claims 1 and 3-14 are anticipated.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 2 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp.**

7. Knapp does not explicitly disclose the limitation such as the device is free from a cover plate exterior to a supporting element for the front electrode layer. However, it is one of the most desirable practice in the art to obtain a device that is thin and light weight and one of way of obtaining such a device is to eliminate extra layers/elements

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and thus using a device that is free from a cover plate exterior to a supporting element for the front electrode layer would have been obvious for at least the advantage of having a device that is thin and light weight.

As to claims 26-28, Knapp differs from the claimed invention because he does not explicitly disclose the use of filter between the light sensitive elements and the front of the display.

However, it is common and known in the art to incorporate a filter (black matrix) between the light sensitive elements (thin film transistors) and the front of the display for several reasons such as to prevent light leakage and an inflow of ambient light into the TFT.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Knapp by incorporating a filter between the light sensitive elements and the front of the display to prevent light leakage and an inflow of ambient light into the TFT.

Accordingly, claims 26-28 would have been obvious.

8. Claims 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp in view of Roberts, US 2002/0149571.

9. Knapp differs from the claimed invention because he does not explicitly disclose the claimed sensor.

Roberts discloses force sensors (accelerometer) for sensing a touch force applied to a touch surface (abstract; page 8, paragraph 0095). Roberts also discloses that the use of sensors is useful in variety of contexts such as to measure properties of

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a force, to locate position on the touch surface at which the touch force is applied, etc.,
(page 1, paragraph 0005).

Roberts is evidence that ordinary workers in the art would find a reason, suggestion or motivation to employ sensors.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Knapp by incorporating sensors to measure properties of a force and to locate position on the touch surface at which the touch force is applied, as per the teachings of Roberts.

Accordingly, claims 16-23 would have been obvious.

10. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knapp in view of Monji et al., (Monji), USPAT 5,276,538.

11. Knapp differs from the claimed invention because he does not explicitly disclose the claimed lens being located in front of the light sensitive elements (transistors).

Monji discloses a display device wherein a lens is disposed in front of the thin film transistors for effective usage of light and thus to improve display quality (col. 1, lines 29-35).

Monji is evidence that ordinary workers in the art would find a reason, suggestion or motivation to incorporate a lens in front of thin film transistors.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Knapp by incorporating a lens in front of at least one of the light sensitive elements for advantages such as effective usage of light and thus improving display quality, as per the teachings of Monji.

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Accordingly, claim 24 would have been obvious.

As to claim 25, Knapp differs from the claimed invention because he does not explicitly disclose the use of filter between the light sensitive elements and the front of the display.

However, it is common and known in the art to incorporate a filter (black matrix) between the light sensitive elements (thin film transistors) and the front of the display for several reasons such as to prevent light leakage and an inflow of ambient light into the TFT.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Knapp by incorporating a filter between the light sensitive elements and the front of the display to prevent light leakage and an inflow of ambient light into the TFT.

Accordingly, claims 25 would have been obvious.

Allowable Subject Matter

12. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

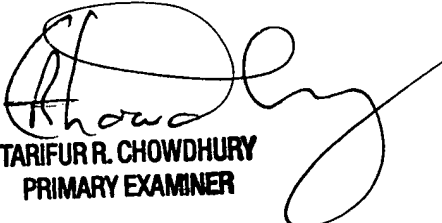
Comment: Applicant's attention is also respectfully pointed out to several co-pending patent applications such as 10/329,217 and 10/442,433 that recites very similar limitations and may be subject to double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
June 21, 2005


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER